

Notice of Allowability

Application No.

09/894,471

Examiner

Philip C. Lee

Applicant(s)

MILLET, TIM

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/2/06.
2. ☒ The allowed claim(s) is/are 1-6 and 30-40.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 12/20/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance.
9. ☐ Other _____


BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Michael A. DeSanctis, reg. no. 39,957 on December 20, 2006.

3. The application has been amended as follows:

a. Replace claim 1 to read as of the following,

In Claim 1,

1. (Currently Amended) A method for detecting nodes in a ring computer network, comprising:

determining whether a ~~network~~ an arbitration token having an embedded node identifier has arrived at a first node of a plurality of nodes associated with the ring computer network within a preselected network timeout period;

if the ~~network~~ arbitration token has not arrived within the preselected network timeout period, ~~generating an~~ regenerating the arbitration token;

receiving the arbitration token at a second node;

determining at the second node whether the arbitration token was modified by a higher priority node of the plurality of nodes by comparing the embedded node identifier with a node identifier associated with the second node;

if the embedded node identifier represents a lower priority than the node identifier associated with the second node, then replacing the embedded node identifier with the node identifier associated with the second node;

~~if the arbitration token was not so modified~~ embedded node identifier represents a priority equal to that of the node identifier associated with the second node, ~~then,~~ transmitting a packet containing a first discovery marker periodically from the second node;

receiving ~~[[a]]~~ the packet at a third node;

for each discovery marker in the packet, saving topology information associated with ~~[[the]]~~ said each discovery marker;

adding a third node discovery marker to the packet when the packet does not contain the third node discovery marker, wherein the third node discovery marker comprises topology information associated with the third node; and

sending the packet to a next node of the plurality of nodes.

b. In claim 5, line 1, replace “the” with – said each --;

c. Replace claim 30 to read as of the following,

In Claim 30,

30. (Currently Amended) A computer-readable media comprising instructions, which when read and executed by a computer cause the computer to perform a method comprising:

detecting arrival of ~~a network~~ an arbitration token having an embedded node identifier;

if the ~~network~~ arbitration token does not arrive within a preselected network timeout period, ~~generating an~~ regenerating the arbitration token;

receiving the arbitration token at a first node of a plurality of nodes of a ring computer network;

determining at the first node whether the arbitration token was modified by a higher priority node of the plurality of nodes by comparing the embedded node identifier with a node identifier associated with the first node;

~~if the arbitration token was not so modified~~ embedded node identifier represents a lower priority than the node identifier associated with the first node then replacing the embedded node identifier with the node identifier associated with the first node;

if the embedded node identifier represents a priority equal to that of the node identifier associated with the first node then, transmitting a packet containing a first discovery marker periodically from the first node;

receiving ~~[[a]]~~ the packet at a second node of the plurality of nodes;

for each discovery marker in the packet, saving topology information associated with ~~[[the]]~~ said each discovery marker;

adding a second node discovery marker associated with the second node to the packet when the packet does not contain the second node discovery maker, wherein the second node discovery marker comprises topology information associated with the second node; and

sending the packet to a next node of the plurality of nodes.

d. In claim 34, line 1, replace “the” with – said each --;

e. Add claim 35 to read as of the following,

In Claim 35,

35. (New) A method comprising:

generating an arbitration token having an embedded node identifier and transmitting the arbitration token to a next node of a plurality of nodes;

circulating the arbitration token among the plurality of nodes associated with a ring computer network by a first node of the plurality of nodes;

when the arbitration token is received by the next node, replacing the embedded node identifier with a node identifier associated with the next node if the node identifier associated with the next node is of a higher priority than the embedded node identifier;

if the arbitration token has not arrived back at the first node within the preselected network timeout period, then regenerating the arbitration token;

after the arbitration token has been circulated among the plurality of nodes and is received by the first node:

determining whether the arbitration token was modified by a higher priority node of the plurality of nodes by comparing the embedded node identifier with a node identifier associated with the first node;

if the embedded node identifier has a priority equal to that of the node identifier associated with the first node, then transmitting a packet containing a first discovery marker periodically from the first node;

receiving the packet at a second node of the plurality of nodes;

for each discovery marker in the packet, the second node saving topology information associated with said each discovery marker;

the second node adding a second node discovery marker to the packet when the packet does not contain the second node discovery marker, wherein the second node discovery marker comprises topology information associated with the second node; and

after the second node discovery marker has been added to the packet, the second node sending the packet to a subsequent node of the plurality of nodes.

f. Add claim 36 to read as of the following,

In Claim 36,

36. (New) The method of claim 35, further comprising when the packet contains a discovery marker associated with the first node, clearing old topology information on the second node associated with the first node prior to saving the topology information associated with the discovery marker that is associated with the first node.

g. Add claim 37 to read as of the following,

In Claim 37,

37. (New) The method of claim 35, further comprising when the packet does contain the second discovery marker, removing the second discovery marker from the packet.

h. Add claim 38 to read as of the following,

In Claim 38,

38. (New) The method of claim 35, wherein the topology information comprises a connection state, a control master state, and node characteristics.

i. Add claim 39 to read as of the following,

In Claim 39,

39. (New) The method of claim 35, wherein said each discovery marker further comprises:
a packet ring master field;
a control master field; and
the topology information.

j. Add claim 40 to read as of the following,

In Claim 40,

40. (New) The method of claim 35, wherein the plurality of nodes comprise blades in a switch.

Reason for Allowance

4. The following is an examiner's statement of reasons for allowance: None of the prior art of records teach or suggest in combination a method of detecting nodes in a ring computer network, comprising:

- determining whether an arbitration token having an embedded node identifier has arrived at a first node of a plurality of nodes associated with the ring computer network within a preselected network timeout period;

- if the arbitration token has not arrived within the preselected network timeout period, regenerating the arbitration token;

- receiving the arbitration token at a second node;

- determining at the second node whether the arbitration token was modified by a higher priority node of the plurality of nodes by comparing the embedded node identifier with a node identifier associated with the second node;

- if the embedded node identifier represents a lower priority than the node identifier associated with the second node, then replacing the embedded node identifier with the node identifier associated with the second node;

- if the embedded node identifier represents a priority equal to that of the node identifier associated with the second node, then, transmitting a packet containing a first discovery marker periodically from the second node;

- receiving the packet at a third node;

- for each discovery marker in the packet, saving topology information associated with said each discovery marker;

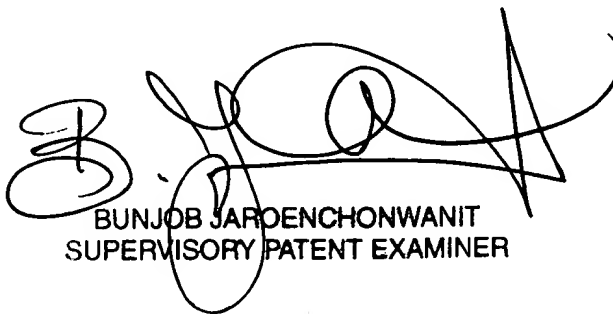
- adding a third node discovery marker to the packet when the packet does not contain the third node discovery marker, wherein the third node discovery marker comprises topology information associated with the third node; and

- sending the packet to a next node of the plurality of nodes.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

P.L.



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